

CHAPTER L

CORONADO – 1990 NOISE ELEMENT

CITY OF CORONADO

Adopted by the City Council September 17, 1974

Resolution No. 4415

Revised April 20, 1999

AS AUTHORIZED BY CALIFORNIA GOVERNMENT CODE, SECTION 65302(g)

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***PROJECT PLANNER**

10/10/1914

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Sound is a vital part of the enjoyment of our environment. Most of us enjoy listening to the waves tumbling on the shore, good music, and many other things as well. However, sound isn't always pleasant or enjoyable. In our cities, noise has increased so much as to become a health hazard. As a health hazard, the City of Coronado and its residents have a responsibility to reduce noise as much as they can. This, in effect, is the reason behind the preparation of this document. The Noise Element must address itself to three major issues: (1) the desirable noise standards for the City; (2) the identification of noise problem areas; and (3) the development of a program of noise abatement.

FIG. 1

SINGLE EVENT LEVELS AND HUMAN RESPONSE¹

Single Events	dB(A)	Human Response
Carrier Deck Jet Operation	145	
	138	Painfully Loud
Jet Plane (100 feet)	130	Limit of Amplified Speech
Rock Music With Amplifier	120	
	118	Maximum Vocal Effort
Thunder, Riveting Machine	110	Permanent Hearing Loss
Garbage Truck, Power Mower	100	
	98	Very Annoying
Heavy Truck(50 feet), Noisy Kitchen	90	Hearing Damage (8 hours)
Pneumatic Drill (50 feet)	85	
Busy Street, Alarm Clock	80	Annoying
Freight Train (50 feet)	75	
Department Store Interior	70	Telephone Use Difficult
Freeway Traffic	68	Contribution to Hearing Impairment Begins
Ordinary Conversation	60	
Light Auto Traffic (100 feet)	50	
	48	Quiet
Living Room	45	
Average Office	40	
Bedroom	38	
City Residence, Soft Whisper	30	Very Quiet
Quiet Country Residence	20	
Rustle of Leaves	10	Just Audible
Threshold of Hearing	0	Threshold of Hearing

¹HUD Circular No. 1390.2

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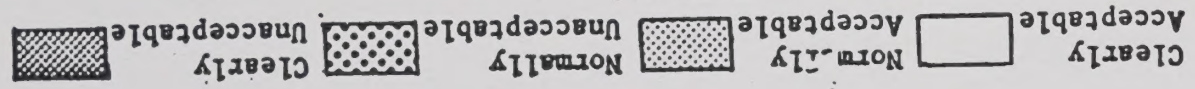
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FIG. 2



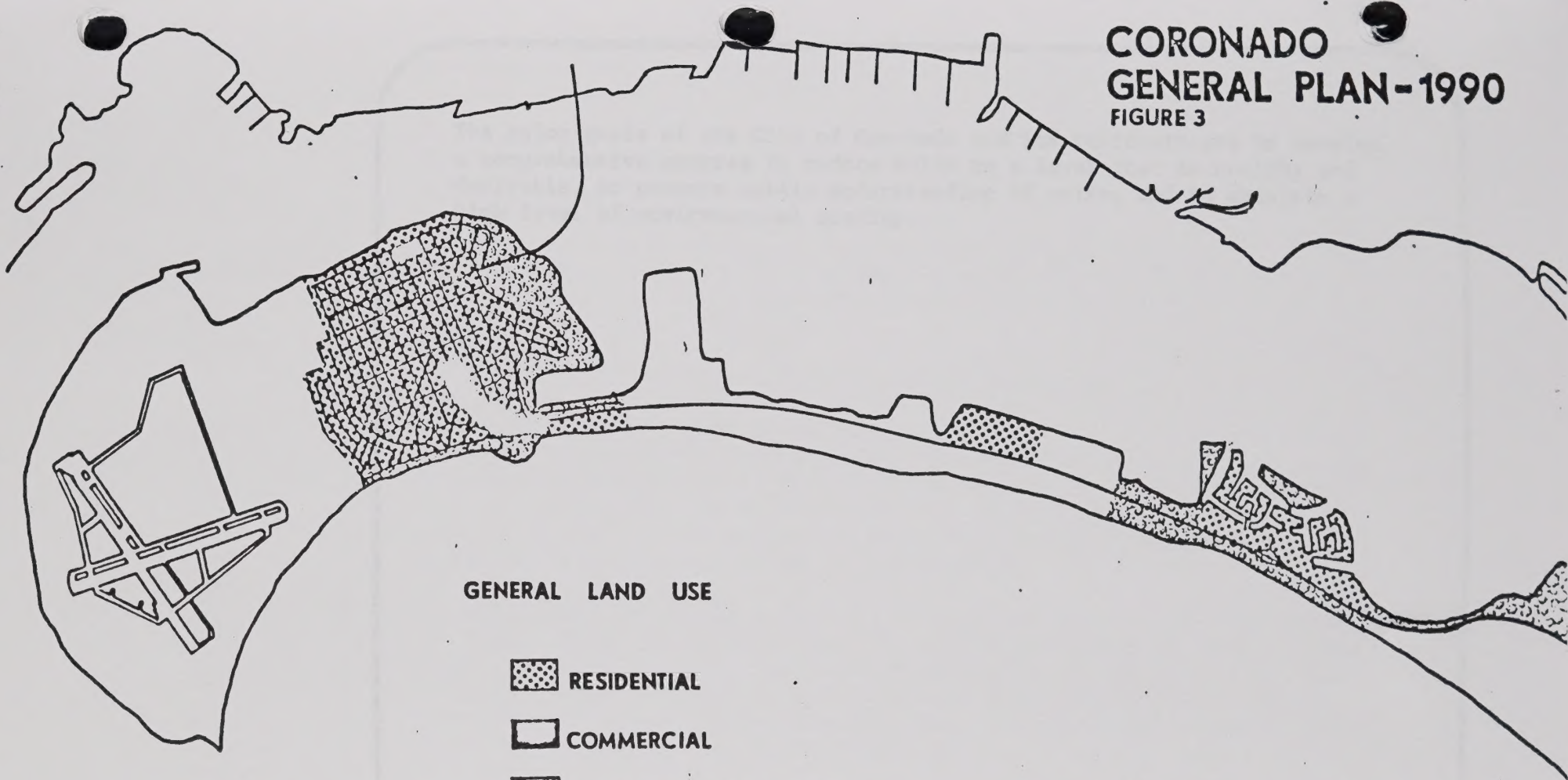
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CORONADO GENERAL PLAN-1990

FIGURE 3



GENERAL LAND USE

-  RESIDENTIAL
-  COMMERCIAL
-  RECREATION/OPEN SPACE
-  MILITARY



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- 1000
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The major goals of the City of Coronado and its residents are to develop a comprehensive program to reduce noise to a level that is healthy and desirable, to promote public understanding of noise, and to maintain a high level of environmental quality.

The City of Coronado must strive to meet the most desirable levels of noise wherever possible. As can be seen in figures 4, 5, 6, and 7, the City of Coronado does have some major noise problems. These noise problems occur because of two major noise sources: (1) the traffic in Coronado, particularly on State Highways 75 and 282, on Ocean Boulevard, and on Alameda and Ocean Avenues; and (2) due to landing aircraft at Naval Air Station, North Island.

In residential, recreational, and hospital areas, the ambient level should not exceed 50 dB(A) during daytime hours (8:00 am to 10:00 pm) and should not exceed 45 dB(A) during nighttime hours (10:00 pm to 8:00 am). Residential development should not be allowed in areas that are in Clearly Unacceptable or in Normally Unacceptable areas (see figures 2 and 8). Residences may be constructed in Normally Unacceptable areas only if the proper precautions in construction are taken and sound barriers shall be required prior to construction.

In commercial and industrial areas, the ambient level should not exceed 60 dB(A) during the daytime hours and should not exceed 50 dB(A) during nighttime hours. Commercial development should not be allowed in areas of greater than 80 dB(A) (see figure 2). If the CNEL level is greater than 75 dB(A), then special construction precautions and sound barriers shall be required prior to construction.

The ambient levels listed in the paragraphs above may be exceeded as follows:

- 5 dB(A) for 15 minutes per hour;
- 10 dB(A) for 6 minutes per hour; and
- 15 dB(A) for 1 minute per hour.

Figures 4, 5, 6 and 7 were developed as part of a "City of Coronado Noise Study: 1998". Figure 4 focuses on traffic noise and depicts the "Unobstructed Noise Contours on Street Map" of the village area of Coronado. Figure 5 depicts the same data for the Coronado Cays. Figure 6 focuses on noise from military plane and helicopter flights, while Figure 7 combines the information in Figures 4, 5 and 6 to depict the City's "Noise Critical Areas" referenced by the California Uniform Building Code.

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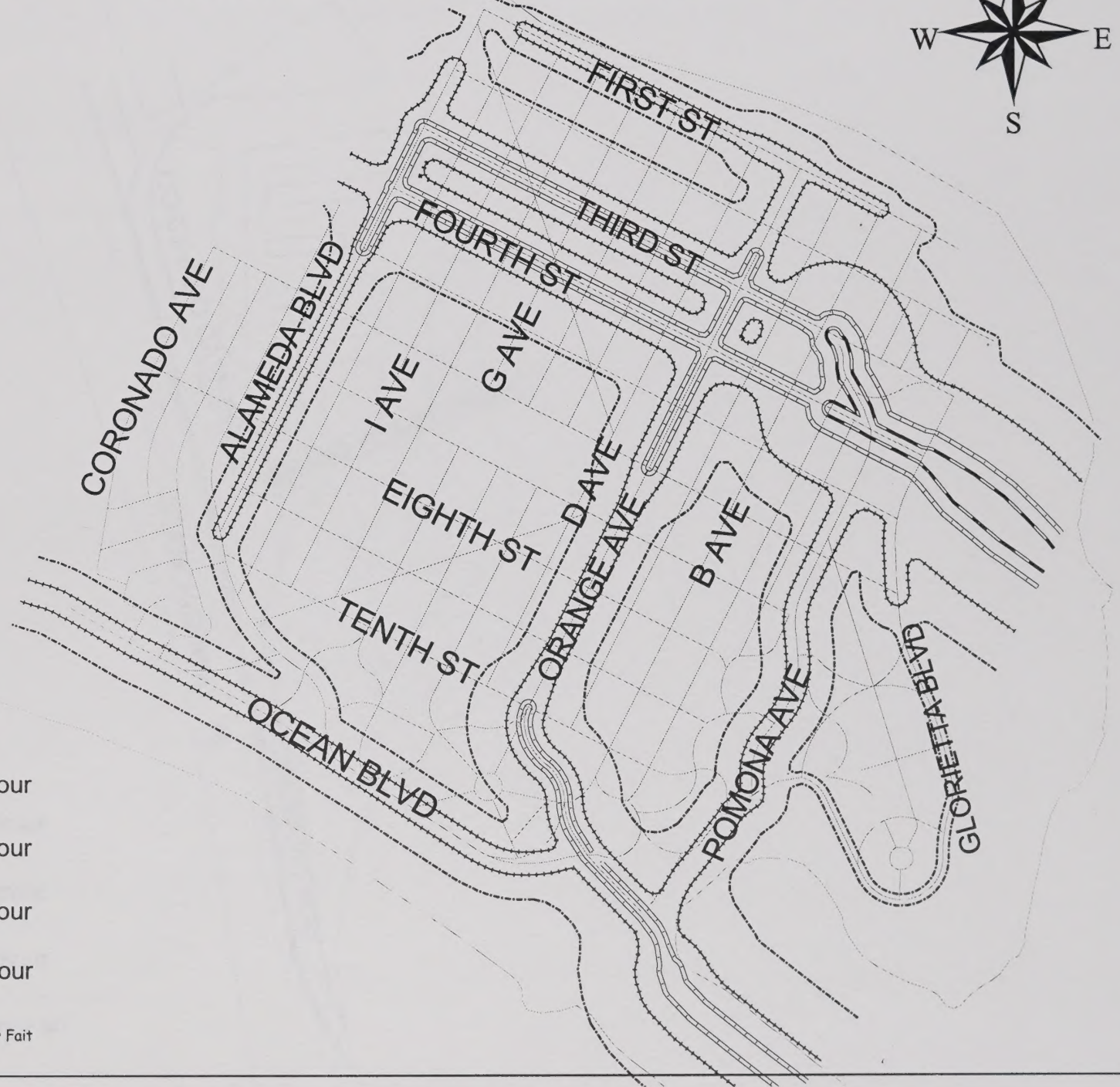
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FIGURE 4

Unobstructed Noise Contours



-  75 dB(A) CNEL contour
-  70 dB(A) CNEL contour
-  65 dB(A) CNEL contour
-  60 dB(A) CNEL contour



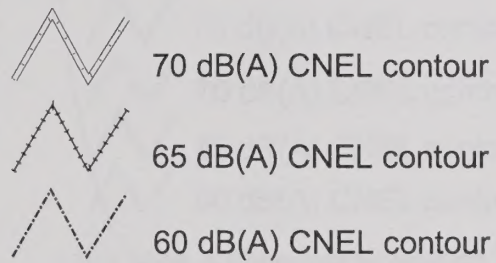


Map of Costa Rica

Carta

FIGURE 5

Noise Contours for Coronado Cays





UNITED STATES DEPARTMENT OF AGRICULTURE

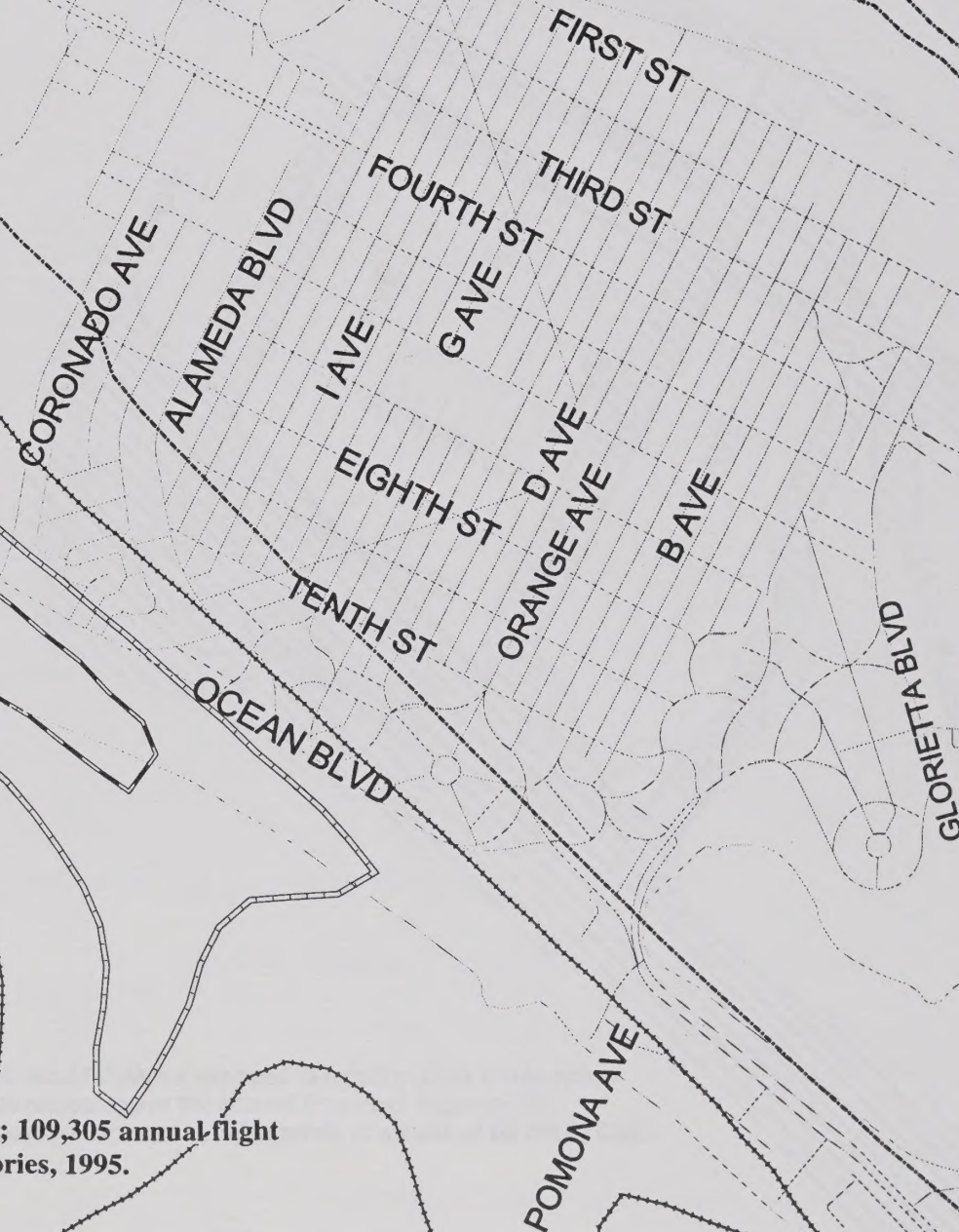
PLANT INDUSTRY

PLANT INDUSTRY

FIGURE 6

NAS North Island

Average Busy-day CNEL Contours *



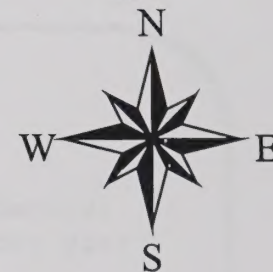
-  85 dB(A) CNEL contour
-  80 dB(A) CNEL contour
-  75 dB(A) CNEL contour
-  70 dB(A) CNEL contour
-  65 dB(A) CNEL contour
-  60 dB(A) CNEL contour

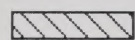
* This Noise is Generated by Navy Air Traffic ; 109,305 annual flight operations assumed by Wyle Laboratories, 1995.

3/24/99 RECON & City of Coronado GIS/Peter fait



FIGURE 7
Noise Critical Areas *



 Noise Critical Areas

* A "Noise Critical Area " is an area where a receiver would likely be exposed to exterior noise levels above 60 decibels CNEL. For the Coronado Cays, units or rooms above the ground floor near Highway 75, since they are not protected by the project's wall, could be exposed to noise levels in excess of 60 dB(A) CNEL.



RELATIONSHIP TO ELEMENTS

The Noise Element relates closely to many major elements of the General Plan. Some of these elements may need to be revised to reflect the problems created in areas impacted by noise.

Circulation Element

The Noise Element relates quite closely to the Circulation Element. Transportation of people and goods is a primary contributor to community noise impact. In fact, traffic contributes to more than three-quarters of the noise impact in any given area. Although, if the traffic is constant and at a comparatively even noise level fewer complaints are received about vehicle noise than of other types of noise (barking dogs, loud parties, etc.). Also, people tend to feel that they can do little or nothing to stop vehicle noise. Noise level standards can, and should, be one of the major determining factors in the placement of transportation facilities.

Land Use Element

Noise is also an important factor in the Land Use Element. Where the noise impact is intensive, land use decisions must take that fact into account in the determination of compatible land use. The Land Use Element should be revised where necessary to include as little residential development as possible in Discretionary-Normally Unacceptable areas of the City. Land use is also particularly important in areas surrounding transportation facilities, major thoroughfares, and commercial and public areas.

Conservation and Open Space Elements

- The Conservation and Open Space Elements are very important to the Noise Element because noise can adversely affect the use of open space for the pursuit of leisure-time activities, unless proper sound barriers are required. Excessive noise can also have an adverse effect on wildlife. Also, open space can be used to buffer noise sources from other

areas through the use of large, open areas or extensive tree planting and berm construction.

RELATIONSHIP TO ENVIRONMENTAL IMPACT QUESTIONS

The Noise Element relates to questions of environmental impact in two major ways. Also, noise standards and contours can be used in environmental impact reports to determine the major problem areas for development.

Social

Noise, as has been discussed in the appendix, is socially disruptive. It may be physically and psychologically damaging to residents of high noise impact areas.

Economic

Noise impact also tends to lower property values and the level of productivity of workers either living or employed in the affected area. Costs of noise are seldom paid for by the noise producer (be it vehicle or stationary source), but are passed on to people in the surrounding area or to the purchasers and users of a noisy or noisily-produced product.

The guide to implementation is, in many ways, the most important part of the Noise Element. All the goals, policies, and standards that the City of Coronado establishes will mean little or nothing if there is no way to put them into action. In this guide, the tools of implementation are placed in the order of their priority. Priority is determined by a number of things, including need, cost, and ease of implementation.

TO BE IMPLEMENTED IN ONE YEAR

The City of Coronado should develop a comprehensive noise ordinance that regulates noise sources according to the standards determined in this element. A noise ordinance could be set up as part of the Zoning Ordinance or as a separate entity. It must be remembered that there are certain exceptions to the Noise Ordinance based upon the greater public good. Because the Police Department receives the majority of the complaints, it should be the enforcing authority. The Police Department should be provided with the equipment necessary for the proper enforcement of the Noise Ordinance. While the Police Department will enforce the ordinance, there will be certain problems that can only be taken care of by a Zoning Enforcement Officer in his role as the Noise Administrator. The job of the Noise Administrator would be to rule on chronic noise problems, to keep noise technology up to date, and to issue permits for public and private events that exceed the noise standards.

The Police Department should also enforce state and federal noise standards where applicable. Specifically, the Police Department should enforce the State Motor Vehicle Code in relation to noise from engines and mufflers. This is particularly important in the case of motorcycles which tend to sound noisier than most other vehicles at least partially because of their higher-pitched sound.

The City of Coronado should ensure that its building code includes requirements for adequate sound insulation, especially in areas with a greater noise impact. Included in the building code should be window placement, size and number since most noise enters and leaves through windows.

Related to building code changes are subdivision regulation changes. There are a large number of items that are concerned with subdivision regulations. Site planning to create the quietest possible environment is necessary especially in a condominium or apartment situation. Coronado should discourage developments that don't take into account the present noise impact or which might contribute excessively to future noise impact. All developers in Discretionary-Normally Unacceptable areas should include measures to mitigate the noise impact through construction and siting techniques. Credit for open space should not be allowed in Discretionary-Normally Unacceptable zones unless permanent noise barriers of some kind are constructed.

The City shall maintain liaison with all agencies concerned with noise. These include the U.S. Department of the Navy through North Island Naval Air Station and the Naval Amphibious Base, all transportation agencies that have any jurisdiction involving Coronado (California Department of Transportation and the U.S. Department of Transportation), the U.S. Environmental Protection Agency, the San Diego Transit Corporation, the San Diego County Health Department, the San Diego County Planning Department, the San Diego Unified Port District, MTDB and SANDAG.

Through these agencies, and others, the City can voice its opinions on noise regulations and on any action by regional, state and federal agencies which may affect the noise impact on Coronado. Strong stands must be taken on actions by these agencies which would increase noise beyond acceptable limits.

TO BE IMPLEMENTED WITHIN 5 YEARS

The City can play an important part in diminishing noise. The City should institute a "Buy Quiet" program. Noise should be a consideration in the purchase of equipment which produces noise levels greater than 65 dB(A) at 50 feet under normal operating conditions. The recommended policy should be that the purchase of the less noisy item be required if noise reduction is 5 decibels lower than the noisier item and the cost is no more than ten percent higher than the noisier item. If the noise reduction is 10 decibels or more than the noisier item, it

should be purchased if the cost is less than 25 percent higher.

Truck routes should be established so that neighborhoods won't be disrupted by their noise. Truck routes should be planned so that their impact affects as few residents as possible.

ONGOING IMPLEMENTATION

The City of Coronado should encourage the use of quiet transportation systems. The City proper(not including Coronado Cays) is small enough that the entire length or width of the City can be traversed by bicycle in fifteen to twenty minutes and in half to three-quarters of an hour by foot. Both of these methods are quiet, efficient means of transportation and can help to reduce noise impact by vehicles. The mini-bus system is also an opportunity to diminish noise. Those people who can not walk or bicycle into the downtown area should be able to use the mini-bus. With the projected San Diego Transit bus service between Imperial Beach and Coronado, people living in Coronado Cays would no longer find it necessary to enter Coronado by automobile, further reducing vehicle use. Also, this bus line could be effective in diminishing traffic into Naval Air Station, North Island and the Naval Amphibious Base.

TO BE IMPLEMENTED AS DEEMED NECESSARY

The City of Coronado staff should revise those elements which have some impact on noise which can be avoided(see previous section).

In some areas, the City should recommend the construction of sound barriers(such as the walls built along State Highway 75 at the Cays). Besides being built along streets and highways in some places, barriers should be constructed between commercial and residential areas. Other types of sound barriers that might be useful in some areas would be dirt mounds or berms or thick hedges.

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FIG. 8 IMPACT INTERPRETATION FOR RESIDENTIAL AND OTHER LAND USES¹

Clearly Unacceptable

Residential Limits

75+ CNEL

80 dB(A)-if exceeded for
60 minutes in 24 hours.

75 dB(A)-if exceeded for
8 hours in 24 hours.

The noise exposure at the site is so severe that construction costs to make the indoor environment acceptable for performance of activities prohibitive. In residential areas, the outdoor environment would be intolerable for residential use.

Discretionary- Normally Unacceptable

Residential Limits

65-75 CNEL

65 dB(A)-if exceeded for
8 hours in 24 hours.

The noise exposure is significantly severe so that unusual and costly building constructions are necessary to ensure adequate performance of activities. In residential areas, barriers must be erected between the site and prominent noise sources to make the outdoor environment tolerable.

Discretionary- Normally Acceptable

Residential Limits

45-65 CNEL

65 dB(A)-if exceeded for
30 minutes in 24 hours.

The noise exposure is great enough to be of some concern, but common building constructions will make the indoor environment acceptable, even for sleeping quarters. In residential areas, the outdoor environment will be reasonably pleasant for recreation and play.

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FIG. 8 (cont.)

Clearly Acceptable

Residential Limits

45 CNEL or less

45 dB(A)-if not exceeded
for 30 minutes in 24
hours.

The noise exposure is such that the activities associated with the land use may be carried out with essentially no interference from aircraft noise. In residential areas, both indoor and outdoor noise environments are pleasant.

¹HUD Noise Assessment Guidelines-Circular No. 1390.2

FIG. 9 RECOMMENDED MAXIMUM OUTDOOR NOISE LEVELS

	dB(A), Ldn*
To Prevent Hearing Damage	80
For Conversation	63
For Sleeping	60
To Prevent Annoyance	60

*Day-Night Average Sound Level

94 00225.4
Supsd.

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